SANTA CRUZ BIOTECHNOLOGY, INC.

Pcf11 (A-7): sc-515669

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

In *Saccharomyces cerevisiae,* the cleavage/polyadenylation factor Pcf11 is a crucial regulatory factor required for recruiting polyadenylation machinery to elongating RNA polymerase II (RNAPII), and is necessary for correct transcriptional termination. Pcf11 (PCF11, cleavage and polyadenylation factor subunit, homolog *(S. cerevisiae)),* is a 1,555 amino acid nuclear protein that is a component of pre-mRNA cleavage complex II. It is suggested that Pcf11 is capable of promoting the dissociation of Pol II elongation complexes from DNA. Pcf11 contains a CTD-interaction domain that binds in a phospho-dependent manner to the heptad repeats within the RNA polymerase II CTD. The gene encoding Pcf11 is located on human chromosoem 11, which houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

REFERENCES

1. de Vries, H., et al. 2000. Human pre-mRNA cleavage factor II_m contains homologs of yeast proteins and bridges two other cleavage factors. EMBO J. 19: 5895-5904.
2. Licatalosi, D.D., et al. 2002. Functional interaction of yeast pre-mRNA 3' end processing factors with RNA polymerase II. Mol. Cell 9: 1101-1111.
3. Hammell, C.M., et al. 2002. Coupling of termination, 3' processing, and mRNA export. Mol. Cell. Biol. 22: 6441-6457.
4. Meinhart, A. and Cramer, P. 2004. Recognition of RNA polymerase II carboxy-terminal domain by 3'-RNA-processing factors. Nature 430: 223-226.

CHROMOSOMAL LOCATION

Genetic locus: PCF11 (human) mapping to 11q14.1; Pcf11 (mouse) mapping to 7 E1.

SOURCE

Pcf11 (A-7) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Pcf11 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Pcf11 (A-7) is available conjugated to agarose (sc-515669 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515669 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515669 PE), fluorescein (sc-515669 FITC), Alexa Fluor® 488 (sc-515669 AF488), Alexa Fluor® 546 (sc-515669 AF546), Alexa Fluor® 594 (sc-515669 AF594) or Alexa Fluor® 647 (sc-515669 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515669 AF680) or Alexa Fluor® 790 (sc-515669 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Pcf11 (A-7) is recommended for detection of Pcf11 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Pcf11 siRNA (h): sc-96335, Pcf11 siRNA (m): sc-152106, Pcf11 shRNA Plasmid (h): sc-96335-SH, Pcf11 shRNA Plasmid (m): sc-152106-SH, Pcf11 shRNA (h) Lentiviral Particles: sc-96335-V and Pcf11 shRNA (m) Lentiviral Particles: sc-152106-V.

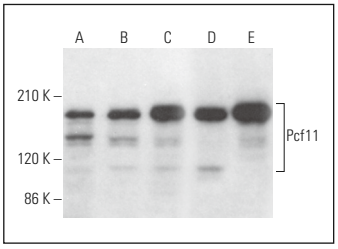
Molecular Weight of Pcf11: 173 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or TK-1 whole cell lysate: sc-364798.

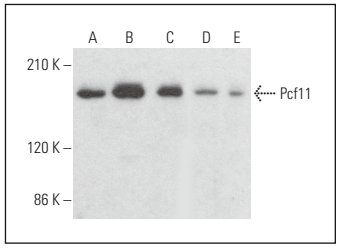
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Pcf11 (A-7): sc-515669. Western blot analysis of Pcf11 expression in Jurkat (**A**), CCRF-CEM (**B**), U-698-M (**C**), TK-1 (**D**) and Daudi (**E**) whole cell lysates.



Pcf11 (A-7): sc-515669. Western blot analysis of Pcf11 expression in HeLa (**A**), HL-60 (**B**), MDA-MB-231 (**C**), NIH/3T3 (**D**) and RAW 264.7 (**E**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Liu, H., et al. 2022. Targeting the mRNA endonuclease CPSF73 inhibits breast cancer cell migration, invasion, and self-renewal. iScience 25: 104804.
2. Song, J., et al. 2022. Regulation of alternative polyadenylation by the C_2H_2-zinc-finger protein Sp1. Mol. Cell 82: 3135-3150.e9.

RESEARCH USE

For research use only, not for use in diagnostic procedures.